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**DISULFIRAM IN THE TREATMENT OF PATHOLOGICAL GAMBLING, A NEW THERAPEUTIC OPTION?**

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Pathological gambling and comorbide alcohol dependence are common occurring diseases. Disulfiram is one of the proven drugs for alcohol dependence. It was shown recently, that Disulfiram is also effective in relapse prevention of cocaine addiction. In addition to its inhibiting effect of the acetaldehyde dehydrogenase (ADH), disulfiram inhibits the dopamine  $\beta$ -hydroxylase (DBH) and thereby augments dopamine and depletes norepinephrine concentrations in the CNS. Inhibition of the DBH is suggested to be the responsible mechanism of Disulfiram acting in cocaine addiction. Previous research indicates common neurochemical substrates for pathological gambling and cocaine addiction. This suggests that dopamine substrates may directly govern the reinforcement process in pathological gambling.

In this report we now present the clinical data of a patient who was treated with disulfiram in our outpatient unit for addiction treatment due to existing alcohol dependence. The patient suffered also from severe pathological gambling.

Initially we started to treat the patient with supervised disulfiram because of his alcohol dependence. During the treatment with disulfiram the patient's desire for gambling disappeared entirely and he has not gambled anymore since then.

However, the exact mechanism of action by which disulfiram reduces urge to gamble is not fully understood, yet. Because craving is a key contributor to relapse, strategies aimed at modulate dopamine increases are likely to be therapeutically beneficial in gambling. Although uncontrolled case observations can only be interpreted with caution disulfiram seems to deserve further investigation and may hold the potential for preventing relapse in gamblers suffering from additional alcohol dependence.